

Insight

remove from the glossy, photoshopped mainstream. If, as Eric G Wilson warns, contemporary societies are particularly at risk of “annihilating melancholia”, we need alternative music—and classical music—more than ever.

The point is not that we should proscribe Rihanna and prescribe Rachmaninov. It is musical diversity, rather than complexity and sophistication per se, that should be our overarching aim. The ideal, that is, is not to churn out individuals who will instinctively embrace Liszt or Lou Reed rather than Lady Gaga, but rather to ensure that as many people as possible are familiar with the enormous range of musical experience that is now available, and that as many people as possible are encouraged to engage with different kinds of music, including through performance, as a means to work through whatever mental challenges they might be experiencing.

In part, this means better curation of the musical resources we already possess. Public broadcasting has an important role in this context, and there is also enormous scope for smarter and deeper incorporation of varied musical genres into public spaces such as museums and concourses. We also need to invest more in musical education. At present, long-term musical education in

the UK and elsewhere is still a privilege largely enjoyed by children of wealthier families, while cuts to local education services threaten to derail the significant progress that had been made over the past two decades.

But the issues at stake here extend beyond digital radio channels, pop-up musical performances, and the availability or otherwise of violin lessons. To return to *Kontakte*: I presented Taylor’s story as a seemingly bleak narrative of isolation and Stockhausen, of boredom and uncertainty. Yet another reading is also possible—a reading in which Derek listens to the “pings, crunches and strangely comic doings” of Stockhausen’s music not because, newly single, he has nothing better to do, but because the music helps him to engage with the darkness he experiences in his life. Derek may well hear “whispers from hell” in the music, but perhaps, like Leverkühn, conversing with his demons through music unbinds him and sets him free. Perhaps, for Derek, Stockhausen is as important as cognitive behavioural therapy and lithium. That means it should be for us, too.

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Essay

Cutting the body to cure the mind

For more on the **history of ovariectomy** see

Longo LD. The rise and fall of Battey’s operation: a fashion in surgery. *Bull Hist Med* 1979; 53: 244–67

For more on the **history of ovariectomy in Britain** see

Frampton S. The most startling innovation: ovarian surgery in Britain, c 1740–1939. PhD diss, London: University College London, 2013

For more on the **history of lobotomy** see

Pressman J. Last resort: psychosurgery and the Limits of Medicine. Cambridge, UK: Cambridge University Press, 1998

For more on the

technological fix theory see Schlich T. The technological fix and the modern body: surgery as a paradigmatic case. In: Kalof L, Bynum W, eds. *The cultural history of the human body*, vol. 6. London: Berg Publishers, 2010: 71–92

On Aug 17, 1872, 23-year-old Julia Ormberg underwent the surgical removal of both of her healthy ovaries in order to relieve her epileptiform convulsions, pelvic inflammation, and pulmonary congestion. These problems had occurred regularly with her menstruation. They had ruined her life and made her a morphine addict. Within a few months, Miss Ormberg recovered from both her operation and her symptoms. In subsequent years, the doctor who did the surgery, Georgia, USA, surgeon Robert Battey (1828–95) published a whole series of successful “normal ovariectomies”, as he called them. In the last three decades of the 19th century, this operation gained widespread popularity, not only for dysmenorrhoea and so-called ovarian neuralgia, but also for epilepsy, nymphomania, and insanity. Thousands of mostly young women had their healthy ovaries removed in order to cure them from a range of debilitating mental disorders. Battey alone is believed to have performed the procedure on several hundred women.

More than 60 years later, on April 17, 1937, Walter Freeman and James Watts inserted an instrument, called a leucotome, into the brain of the 59-year old housekeeper, Miss EG. Under local anaesthesia, they made “nine cores in the white matter of each frontal lobe”. Immediately, the patient’s “tenseness that was such a prominent feature

when the operation began was replaced by relaxation...” Miss EG was a timid and “hyperreligious” person, who had been tormented for many years by “endless doubts, phobias, crying spells, and hand-washings...associated with apprehension, anxiety, insomnia and innumerable somatic complaints.” After her lobotomy she became “cheerful and talkative, alert, and interested in current affairs, fond of the radio, reading and playing cards”. In August, she returned to her home to keep house for her sister. “While the patient was relieved of the distressing symptoms she had suffered so long, her true character was unchanged”, Freeman and Watts claimed in their case report. In the 1940s and 50s, lobotomy became popular, especially in North America. Over 5000 such operations were performed in 1949 alone, the year when António Egas Moniz was awarded the Nobel Prize for having invented the operation.

Ovariectomy and lobotomy are the two best-documented cases of using surgery to treat mental disease, and are today textbook cases of therapeutic hubris and medical fallacy, their proponents denounced as cranks or charlatans. However, both interventions, even though controversial already at the time, were part of the medical mainstream. The strategy of treating mental disease through bodily intervention was by no means a marginal idea. It reflects a fundamental, and in many cases very

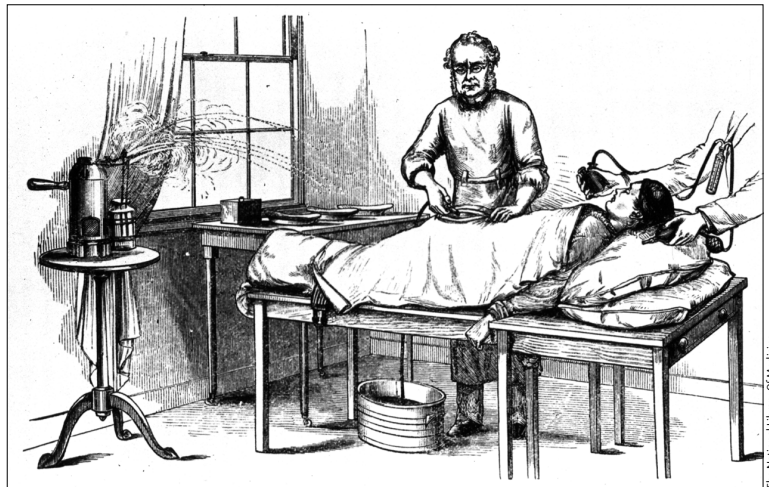
successful, problem-solving strategy of modern scientific medicine: the technological fix—a circumscribed bodily intervention in order to solve a complex medical problem.

The removal of pathologically enlarged ovary glands performed by Ephraim McDowell in 1809 was one of the first surgical interventions into the abdominal cavity. As a pioneer operation, it paved the way for abdominal surgery more generally.

By the 1860s, many surgeons were performing ovariectomies to relieve women from tumours and swellings of the organ, which often reached grotesque and life-threatening proportions. Despite initial skepticism in the medical profession, when, by the 1890s, the operation's mortality had been drastically diminished and hundreds of successful cases of the operation had been documented, ovariectomy came to be viewed as emblematic of Victorian progress in medicine. It was seen as a radical but viable surgical fix for an otherwise intractable chronic condition. In 1877, Thomas Spencer Wells (1818–97) proclaimed that his ovariectomy operations alone had added 18 000 years of life to European women.

At that time many scientific authorities started ascribing a systemic influence of the ovaries on women's bodies and minds. This is why it made sense to some surgeons to remove the organs to alleviate the systemic conditions that seemed to be caused by them. These surgeons aimed at curing the numerous physical and psychological problems suffered by their patients with menstrual irregularities by inducing a surgical menopause. "Battey's operation", as it came to be named, underwent what we would call today a flagrant indication creep and was performed on women whose menstrual disorders were believed to be causing conditions such as hysteria, nymphomania, melancholia, and insanity. For its proponents, this operation represented one of the unequalled "triumphs of surgery".

However, with increasing spread, leading surgeons started criticising the use of ovariectomy for mental disease. For one, the vague standards for evaluating the procedure's effect were no longer convincing: "Gynecologists will never empty the lunatic asylums", Wells (who performed his own ovariectomies for more limited indications) warned in 1886. Additionally, the expanding use of ovarian surgery was not based on any major developments in the physiological understanding of the organ. Removing ovaries in such large numbers looked suspiciously like commercialism. Some speculated that disorders were being invented by surgeons specifically so that they could be cured for a price. Battey's operation fell into disrepute. It was dubbed "castration", "spaying", "unsexing", only performed by "gynecological perverts". In the eyes of many it had become a "fashion"—a pejorative and highly loaded term as used, for example, by the playwright and prominent critic of the medical profession, George Bernard Shaw in



Doctor performing ovariectomy (London, 1882)

1909. Battey became notorious, his name a synonym of the seeming excesses of 19th-century gynaecologists.

Lobotomy had a very similar fate. Like ovariectomy, lobotomy represented the violation of a traditional taboo space. This time it was the cranial cavity. And like ovariectomy, lobotomy also came up in the context of increasing confidence in surgical possibilities at a time when neurosurgeons had shown that doctors could successfully work on structures within the skull.

Using the body as an access point to curing the mind was not new. Hydrotherapy and various shock and fever therapies all approached mental derangement through the body. They all answered an emerging demand for a more active management of the problems posed by huge numbers of institutionalised patients with mental disorders. Advances in other areas of modern medicine had raised the hopes for new targeted therapies that would eventually overcome the depressing lack of progress in the field.

In 1935, the Portuguese neurologist Egas Moniz undertook a series of 20 operations on patients with mental disease and reported that he had obtained very impressive short-term results. In what he called "psychosurgery", Moniz destroyed brain tissue of areas connecting the frontal lobes with the rest of the brain. He first used an injection of absolute alcohol, then a plunger-activated corer. He reported the best results in cases of agitated depression and involutionary melancholia, of whom the majority were "greatly improved".

Moniz' report found the attention of Walter Freeman, an enterprising American neurologist, who set out to repeat the experiment, assisted by his colleague, neurosurgeon James Watts. Within 6 months, Freeman and Watts performed as many operations as Moniz had. They became the main proponents of the approach in the

Insight



The National Library Of Medicine

António Egas Moniz (left) and Walter J Freeman (right)

US and wrote the textbook that contains the case history presented earlier.

Especially in the USA, where the growing number of chronically sick patients was seen as a pressing problem, lobotomy was increasingly used on patients with chronic conditions in the setting of mental hospitals, and became very popular after World War II. Freeman developed a simplified procedure for the operation, using a transorbital approach with an instrument that resembled an ice pick. With a caravan and his mobile “icepick” lobotomy set, he travelled the country to perform his procedure in various mental health institutions.

Part of surgery's attraction came from its immediately verifiable effects. Lobotomy seemed to demonstrate that brain physiology and human behaviour were connected in a way that was understandable to science and open to practical intervention by trained physicians. Its unique power was seen in its ability to break up the neuronal pathways that had become fixed, thus opening the possibility of reprogramming the patient's behaviour. With lobotomy, American psychiatry in the 1940s embraced the promise offered by the scientific medicine of the future and seemed to finally catch up with other areas of modern medicine.

As the use of lobotomy accelerated, the unease generated by such a drastic and irreversible operation grew too. It remained unclear what lobotomy actually did to the individual, and the issue of a scientific validation could no longer be evaded. At a time when the standards for clinical research became stricter in general, follow-up studies produced discouraging results. The eventual introduction of the major tranquilisers in the 1950s sounded the death knell for the operative procedure. Lobotomy went down in history as an example of medical innovation gone awry, immortalised in movies, documentaries, and novels. Psychosurgery thus illustrates how, in certain historical contexts, the strategy of the technological fix

became particularly appealing to practitioners; but it is also an example of how such a technology can fall into disgrace—often, however, to be replaced by another technological fix, in this case psychotropic drugs, whose effect was reversible and which didn't require an icepick.

So how can we understand the widespread use of ovariectomy and lobotomy? As Jack Pressman asks in his book *Last Resort: Psychosurgery and the Limits of Medicine*: “Are we to believe that all of these physicians were incompetent or irresponsible, or worse?” As he shows, ineptitude and immorality are not our only explanatory options. There are other ways of understanding why well meaning and capable doctors in a particular time and at a particular place decided to apply therapies that we today don't find suitable any more. We need to keep in mind that treatment decisions are always context dependent as is, in fact, even the definition of the problem that needs to be treated. What kind of behaviour counts as pathological (vs normal or immoral)? What causal and pathophysiological processes lead to this behaviour (systemic effect of the female reproductive organs, brain dysfunction)? What other treatments are available (somatic treatment, major tranquilisers)? All of these factors make a particular treatment option more or less plausible. The assessment of treatment results is again highly context dependent. Many women who underwent Battey's operation were thought to be better off afterwards. Similarly, within the therapeutic calculus in 1940s America, the altered state of patients who had had a lobotomy was actually seen as a success: the benefits of social adaptability and behavioural re-adjustment were valued more highly than self-actualisation and intellectual autonomy. But even in its heyday, lobotomy was, like ovariectomy, a last resort treatment. It was used as a salvage operation, as an attempt at making the best of a tragic set of conditions. As such, both ovariectomy and lobotomy made clinical sense at the time.

Cutting the body to cure the mind is a very special treatment strategy. It represents the appealing strategy of the technological fix for complex and otherwise intractable problems. It is, however, associated with a particular risk of failure, since, in surgery, the link between intervention and result is highly visible. In addition, ovariectomy and lobotomy are irreversible changes to the body's structure, which increases the stakes even more. For these reasons, surgical treatments for mental disease were especially prone to be abandoned and scandalised later on. But they are still examples of the fundamental context-dependence of any treatment decision, including today's generally acknowledged therapies, some of which, we can be sure, later historians will label as fads and fashions too.

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